



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/016,734 | 11/30/2001 | Bin Zhao | 12569-16/NEC | 7943 |
| 34284 | 7590 | 06/03/2004 | EXAMINER | |
| ROBERT D. FISH; RUTAN & TUCKER, LLP P.O. BOX 1950 611 ANTON BLVD., 14TH FLOOR COSTA MESA, CA 92628-1950 | | | SHAHER, RICKY D | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2872 | |

DATE MAILED: 06/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-----------------|--------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/016,734 | ZHAO, BIN | |
| | Examiner | Art Unit | |
| | Ricky D. Shafer | 2872 | |

-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6 and 12-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6, 12 and 14 is/are rejected.
- 7) ☒ Claim(s) 13 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's arguments filed 12 March 2004 have been fully considered but they are not persuasive.

In response to applicant's arguments, the recitation of an interleaver has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the interleaver separates an input optical beam into two optical beams of interleaved optical wavelengths, an interleaver consists of one input port and two output ports, and that there are two optical beams coming out of the interleaver, each output optical beam consists of a group optical components of interleaved wavelengths) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 2872

3. Claims 6 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Cheng et al ('005).

Cheng et al discloses an optical device comprising a birefringent element assembly including at least one birefringent element (12) for providing two output components which are generally orthogonal, a polarization rotator (16b) and a second birefringent element (18), and a reflector (22 or 62) configured to direct the two components back through the birefringent assembly, wherein said at least one birefringent element of Chang et al clearly has a phase delay and an angular orientation, both of which are inherent to birefringent calcite or rutile crystals, which meets the criteria set forth by applicant in Table III, due to the fact that Table III does not provide for any specific phase delay nor angular orientation for any particular birefringent element. For example, the angular orientation ϕ_1 , ϕ_2 , ϕ_3 can be any angle from 0 to 2π (i.e. any angular orientation), and the integers m_1 , m_2 , m_3 , k_1 , k_2 , k_3 and l can all be set to zero, giving an unspecified value of Γ (i.e. any phase delay) for the first stage phase delay. Note figures 1 to 1C and 6 along with the associated description thereof.

4. Claims 6, 12 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Cheng et al ('340).

Cheng et al discloses an optical device comprising a birefringent element assembly including at least one birefringent element (24, 24A) for providing two output components which are generally orthogonal, a polarization rotator (34) and at least two additional birefringent elements (24B, 32A), and a reflector (36) configured to direct the two components back through the birefringent assembly, wherein said at least one birefringent element of Chang et al clearly has a phase delay and an angular orientation, both of which are inherent to birefringent calcite

Art Unit: 2872

crystals, which meets the criteria set forth by applicant in Table III, due to the fact that Table III does not provide for any specific phase delay nor angular orientation for any particular birefringent element. For example, the angular orientation ϕ_1 , ϕ_2 , ϕ_3 can be any angle from 0 to 2π (i.e. any angular orientation), and the integers m_1 , m_2 , m_3 , k_1 , k_2 , k_3 and l can all be set to zero, giving an unspecified value of Γ (i.e. any phase delay) for the first stage phase delay. Note figures 2A to 3C and the associated description thereof.

5. Claims 13 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ricky D. Shafer whose telephone number is (571) 272-2320.

Art Unit: 2872

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RDS

June 01, 2004

Ricky D. Shiff
RICKY D. SHIFF
PATENT ATTORNEY
ART UNIT 2872